

Understanding Diabetes

Ashley Beck RD, CDE

Kootenai Clinic Diabetes & Endocrinology
Services

Statistics

Diabetes(poorly controlled) is the 7th leading cause of death in the U.S.

Nearly 29.1 million Americans have diabetes:

21.0 million diagnosed

8.1 million undiagnosed

The annual incidence of diagnosed diabetes in youth was estimated at:

18,436 with Type 1

5,089 with Type 2



Diabeetus? Sugar Diabeetis?? Oh...Diabetes!!!



Diabetes is derived from the Greek *diabanien*, which literally means “passing through” or “siphon”, referring to one of the main symptoms of diabetes, **excessive urine discharge**.



Source: DIABETease

What is Diabetes?

- o **Diabetes**: a condition that causes the level of glucose in the bloodstream to get too high.
- o Over time, high **blood glucose** levels can lead to complications.

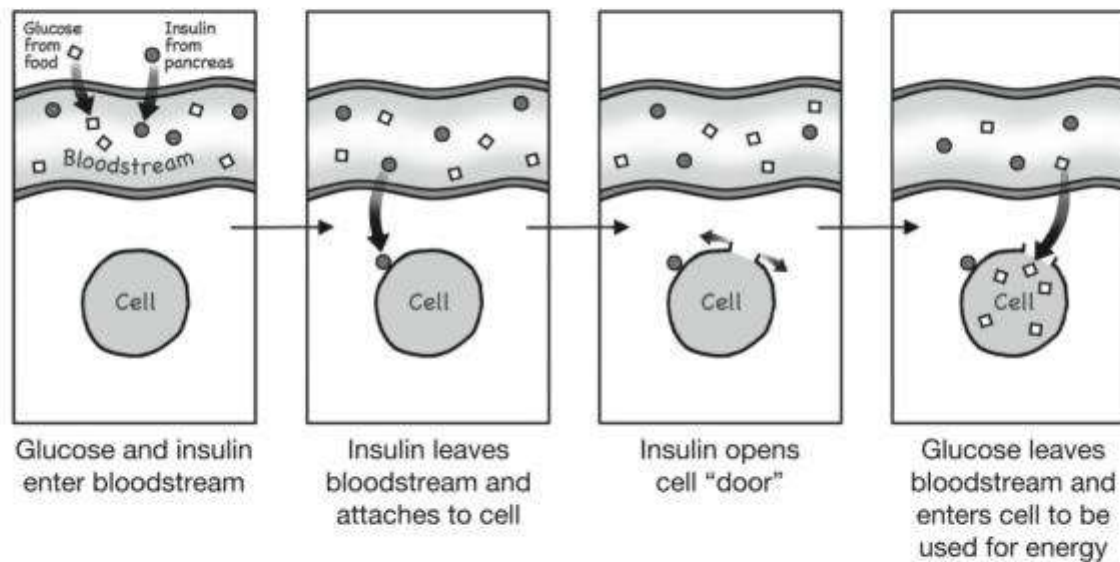
What is Glucose?

- o **Glucose:** our body's main energy source derived from protein, fat, and (in largest part) carbohydrate.
- o Through the digestive process, carbohydrate gets broken down & turned into glucose.
- o Glucose is then absorbed into the bloodstream, **resulting in elevated blood glucose.**
- o Our body cells **cannot** use glucose without the help of **insulin.**

What is Insulin?

- o **Insulin:** a hormone produced by the pancreas that helps regulate blood glucose levels.
- o Acts like a key that unlocks the body cell, allowing glucose to enter from the bloodstream.
- o Once glucose is in the body cell it can be used for energy.

How Your Body Uses Glucose



Types of Diabetes

Pre-Diabetes

Type 2 Diabetes

Type 1 Diabetes

Gestational Diabetes

Type 3 Diabetes?...

Diabetes Diagnosis

DIAGNOSIS	A1C	FASTING GLUCOSE	RANDOM GLUCOSE*	2-HOUR OGTT
DIABETES	6.5% or higher	126 mg/dL or higher	200 mg/dL or higher with symptoms	200 mg/dL or higher
PREDIABETES	5.7–6.4%	100–125 mg/dL		140–199 mg/dL

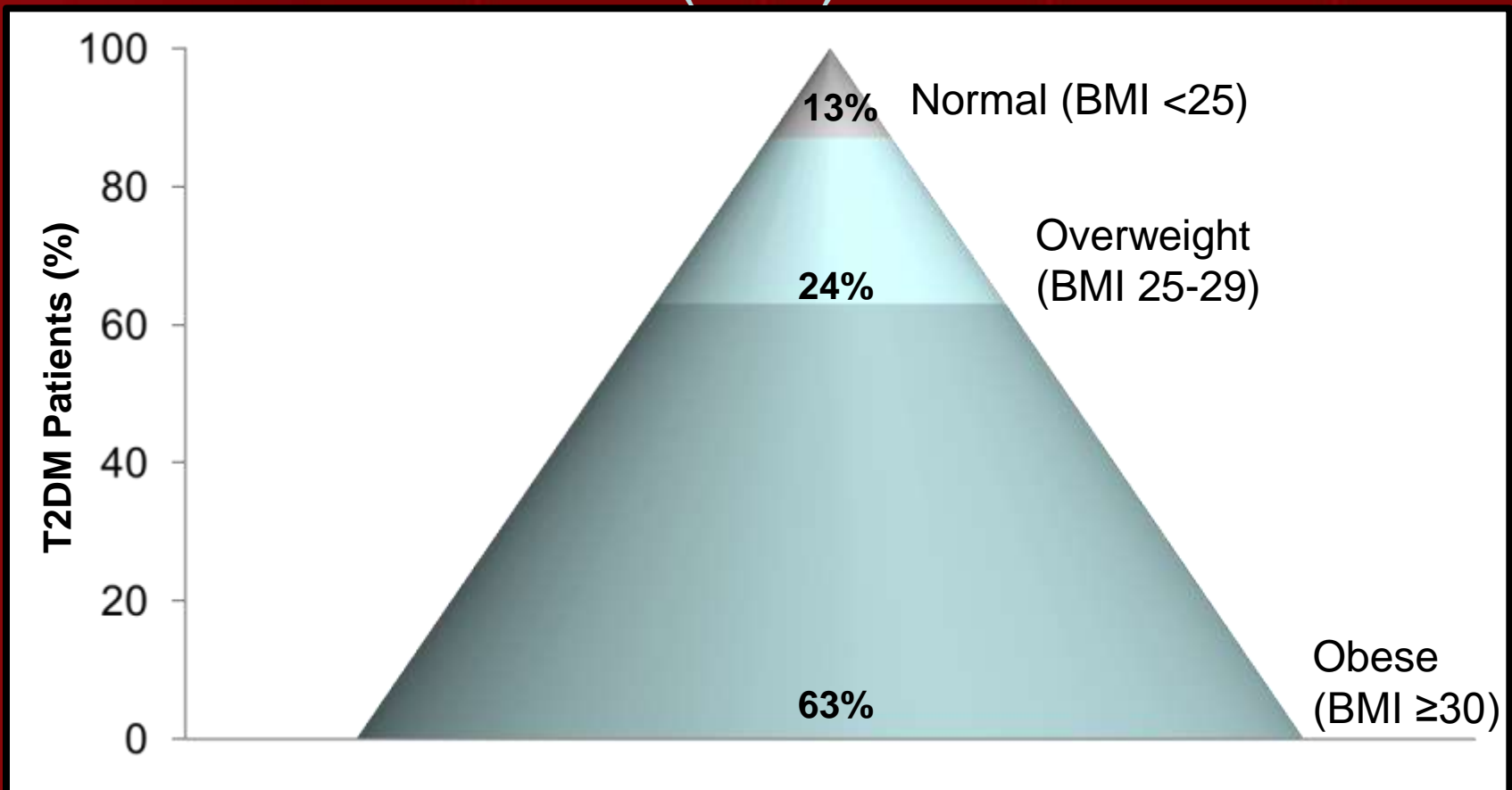
*Random glucose test cannot be used to diagnose prediabetes.

Type 2 Diabetes Risk Factors

- Impaired Fasting Glucose (IFG)
 - Over the age of 45
- Family History of Diabetes
 - Overweight/Obesity
 - High Blood Pressure
 - Rarely Physically Active
- If you are: African American, Hispanic, Asian American, Native Hawaiian or Pacific Islander, Native American, or Alaska Native
- Gestational Diabetes or your baby weighed 9 lbs or more at birth
 - Heart or Blood Vessel Disease
 - Elevated Cholesterol or Triglyceride levels
 - Smoking
 - Polycystic Ovary Syndrome
- Acanthosis Nigricans: dark velvety patches of skin on neck, armpits, or elbows.

Prevalence of Obesity in Type 2 Diabetes

NHANES 1999-2004
(N=984)



Source: DIABETease

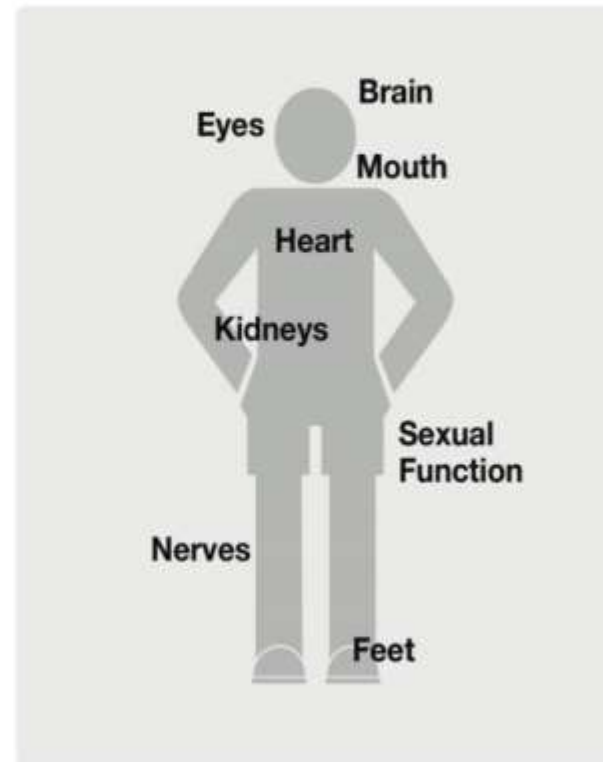


"Talk about family history. Even our cat has diabetes."

Diabetes Complications

High glucose levels can lead to complications that affect your:

- Brain
- Eyes
- Mouth
- Heart and blood vessels
- Kidneys
- Sexual function
- Nerves
- Feet



Prevention of Type 2 Diabetes

<http://diabetes.niddk.nih.gov/dm/pubs/preventionprogram/>

- o **Maintain a Healthy & Active Lifestyle**
 - o **Physical Activity**
 - o At least 30 minutes 5 days/week
 - o **Balanced Meal Planning**
 - o Plate Method
 - o **Healthy Body Weight**
 - o Losing as little as 10-15 pounds can lower your risk of Type 2 Diabetes by more than half
- o **Early Initiation of Oral Medication: Metformin**
- o **Routine Check-Ups with your Primary Care Physician**
 - o Check Fasting Blood Glucose & Hemoglobin A1C

Management Of Type 2 Diabetes

Team Approach:

o Patient

- o Type 3 Support
(Friends & Family)
- o Primary Care
Physician
- o Endocrinologist
- o Certified Diabetes
Educator
- o Counselor/Therapist
- o Exercise
Physiologist/
Personal Trainer

Meal Planning & Exercise

Blood Glucose Monitoring

Oral Medications

Non-Insulin Injectables

Insulin

Insulin Pumps

Continuous Glucose
Monitoring Systems

**“Well –controlled diabetes is the
leading cause of nothing.”**

Dr. William Polonsky

Co-Founder & President of the Behavioral
Diabetes Institute (BDI)

Kootenai Clinic
Diabetes & Endocrinology Services

Maria Rodebaugh M.D., FACE

Sue Trenkle N.P., CDE

Registered Dietitian (RD)
Certified Diabetes Educators (CDE)

Krista Criswell RD, CDE

Bre Bergeron RD, CDE

Sheila Schaal RD, CDE

Ashley Beck RD, CDE

Kootenai Clinic Diabetes & Endocrinology Services:

Maria Rodebaugh M.D., FACE

Consultation and treatment of many endocrine disorders, including:

- Adrenal Disease
- Diabetes
- Metabolic Abnormalities
- Parathyroid Conditions
- Pituitary Disorders
- Thyroid Disease

Kootenai Clinic Diabetes Education Program is recognized by the: **American Diabetes Association**

What does this mean?

- o Kootenai Clinic's Diabetes Education Program is a quality diabetes self-management education program that:
 - o Meets the National Standards for Diabetes Self-Management Education & Support
 - o These standards are reviewed & revised every 5 years by key-stakeholders & experts in the diabetes community
 - o Provides evidence-based Education & Self-Management Support

The American Diabetes Association is the largest and most widely known organization in the field of diabetes, and is one of only 2 deemed bodies as National Accrediting Organization of DSMT programs by the Centers for Medicare and Medicaid.

Kootenai Clinic's Diabetes Education Program Includes:

Individual One-on-One Sessions with a CDE

Self-Monitoring of Blood Glucose
Carbohydrate Counting & Meal Planning
Training on Insulins, Non-Insulin Injections, & Oral Medications

Type 2 BASICS Classes

Gestational Diabetes

Insulin Pump Training & Management

Continuous Glucose Monitoring Systems

Professional Studies & Interpretation
Personal CGM Training & Interpretation

Medical Nutrition Therapy

CDE's are also Registered Dietitians & can incorporate special diet restrictions into individual diabetes regimes.

Kootenai Clinic Diabetes & Endocrinology also offers:

Healthy Cooking Classes

Metabolic Testing: Indirect Calorimeter

Personalized Medical Nutrition Therapy

Community Events

Educational Presentations

Rural Outreach

Much More To Come!!!

How can someone be seen at Kootenai Clinic Diabetes & Endocrinology?

**Referral from Primary Care Physician for
consults with:**

Dr. Rodebaugh MD, FACE

Sue Trenkle NP, CDE

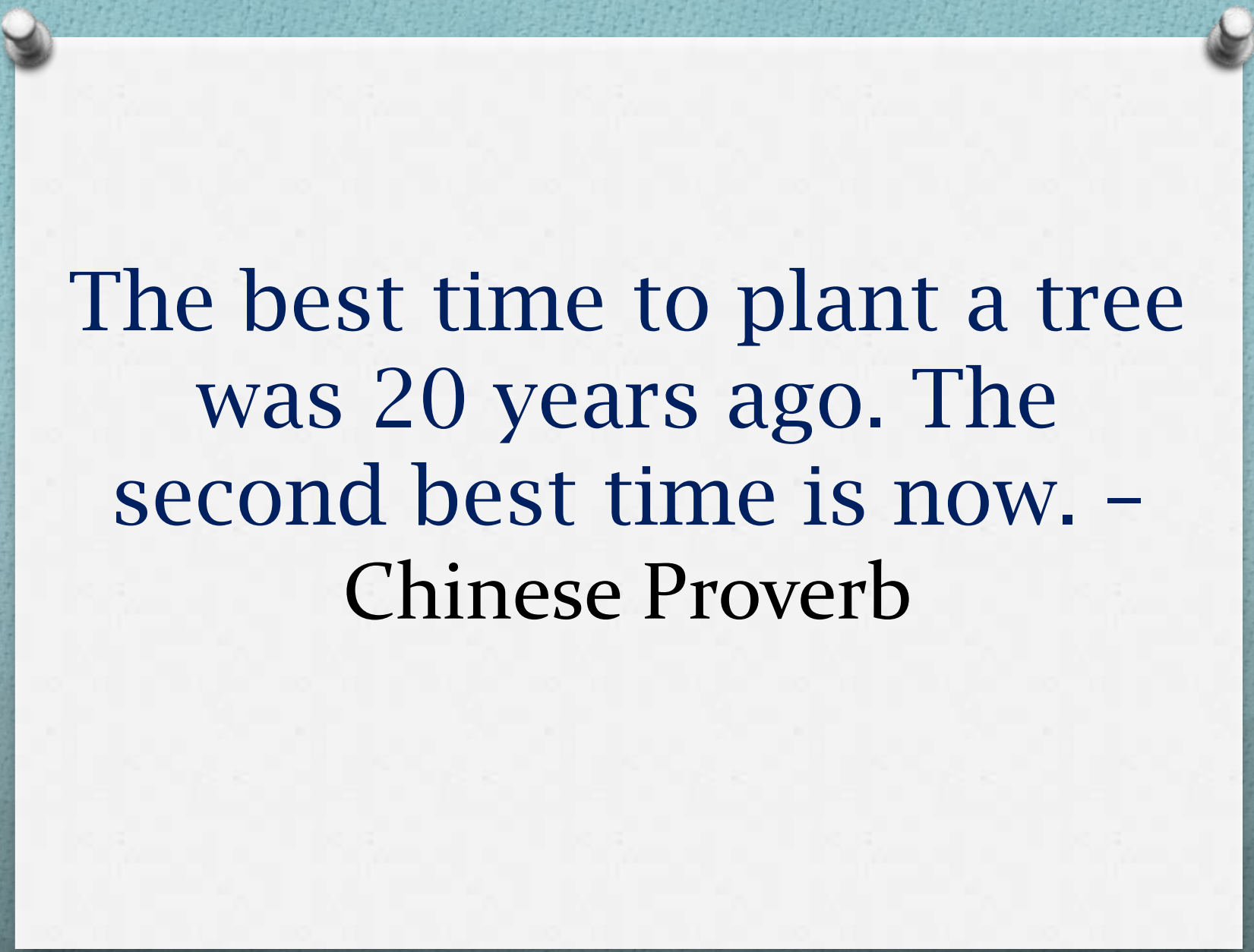
Certified Diabetes Educators

No Referral Needed for:

Metabolic Testing

Cooking Classes

Community Events



The best time to plant a tree
was 20 years ago. The
second best time is now. –
Chinese Proverb